



## VLEPSIS® TECHNOLOGY

Meta Materials Inc. (META®) has developed VLEPSIS®, a revolutionary wide-area motion imagery (WAMI) technology. VLEPSIS is a turnkey multi-gigapixel EO WAMI system that integrates a gimbaled sensor package with a vertical take-off and landing (VTOL) unmanned aerial system. It provides persistent, large-area, scene coverage at a resolution consistent with ability to discern people. On-board software allows for 50+ simultaneous live video streams with AI-based multi-target tracking and 'DVR' capability. An integrated geographic information system is provided with the ground station for map-based user interactions and exploitation. An accompanying ground-based high-performance processing system provides full-scene machine learning for post-mission forensic analytics. An optional ultra high-resolution EO/IR video skyball is provided for cross-cued investigation of individual objects in the WAMI field of view.

## BENEFITS



Enhances the ability to protect critical assets and secure big events in real time



Provides situational awareness through unprecedented wide area motion imaging



Helps safeguard lives during environmental disasters



Enhances the ability to understand the environment



Enables smart city applications

## APPLICATIONS

VLEPSIS® technology uses proprietary hardware and AI software to enable analytical insights across a wide range of purpose-orientated applications, including:



Smart Cities



Disaster Assessment and Recovery



Border Monitoring and Control

# APPLICATIONS



Traffic Management



Security and Surveillance



Search and Rescue

## VLEPSIS® SENSOR PERFORMANCE AND CAPABILITIES

System Performance Parameter	Value	
Ground Area Coverage	12,000' AGL	24 km <sup>2</sup>
	24,000' AGL	96 km <sup>2</sup>
GSD (@ nadir)	12,000' AGL	10 cm
	24,000' AGL	20 cm
Video Window Frame Rate	Full resolution	4 Hz
	Binned x 2	10 Hz
FFOV Archive Video Frame Rate	Full resolution	2 Hz
	Binned x 2	5 Hz
Number of Simultaneous Video Windows	50+	
Live Window Latency (imaging to client)	< 3 sec	
On-board DVR Windows and Tracking	Yes	
Live Window Multi-Target Tracking	Yes	
Size (gimbal diameter)	14 in	
Weight	20 kg	
Power	500 W	